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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte* STEPHEN SELLE

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Appeal 2007-2787  
Application 10/824,915  
Technology Center 3600

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Decided: January 22, 2009

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Before JENNIFER D. BAHR, LINDA E. HORNER, and STEFAN  
STAICOVICI *Administrative Patent Judges*.

STAICOVICI, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Stephen Selle (Appellant) appeals under 35 U.S.C. § 134 from the Examiner's decision rejecting claims 1-11. We have jurisdiction over this appeal under 35 U.S.C. § 6 (2002).

## THE INVENTION

The Appellant's invention is drawn towards an adjustable threshold fastener 300 including a threaded stud 320 having receptacles 301 and 307 and a rectangular shaped nut 321 having a frontward flange 305A and a rearward flange 305B (Spec. 6, ll. 17-20 and fig. 3). The Appellant's invention is further drawn to a curvilinear track 423 holding a plurality of the threshold fasteners 300 including a nut guide 422, a support guide (head guide) 421, and a rimmed portion or edge 420 (Spec. 7, ll. 17-19 and figs. 4 and 5).

Claims 1 and 11 are representative of the claimed invention and read as follows:

1. A fastener comprising:
  - a threaded stud;
  - a rectangularly-shaped nut having first and second ends;
  - said first and second ends each having a raised flange;
  - and, said threaded stud interengaging said rectangularly-shaped nut.
  
11. A curvilinear delivery track for delivering a plurality of fasteners, said delivery track includes a head guide and a flange guide, wherein:
  - each of said fasteners comprises a U-shaped in cross-section nut adapted to receive a threaded stud;

each said stud includes a support head;

each of said U-shaped nuts includes a forward and a rearward flange;

said head guides of said delivery track engage said support heads of said fasteners preventing excessive rotation or vertical displacement of said fastener; and,

said support heads of said fasteners in combination with said head guide prevent shingling and/or jamming of the delivery track.

### THE REJECTIONS

The Examiner relies upon the following as evidence of unpatentability:

Bursk	US 4,352,258	Oct. 5, 1982
Selle <sup>1</sup>	US 5,993,320	Nov. 30, 1999
Mettler	US 6,185,870 B1	Feb. 13, 2001
Leistner	US 6,209,722 B1	Apr. 3, 2001
Selle <sup>2</sup>	US 6,640,968 B2	Nov. 4, 2003
Appellant's Admitted Prior Art (AAPA)		Spec. 3, ll. 1-3; fig. 1B

The following rejections are before us for review:<sup>3,4</sup>

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<sup>1</sup> Hereinafter referred to as Selle '320.

<sup>2</sup> Hereinafter referred to as Selle '968.

<sup>3</sup> The rejection of claim 4 under 35 U.S.C. § 112, second paragraph, as being indefinite, has been withdrawn by the Examiner (Ans. 3).

<sup>4</sup> The rejection of claim 2 under 35 U.S.C. § 103(a) as unpatentable over the AAPA in view of Selle '968 or Leistner has been withdrawn by the Examiner (Ans. 3).

The Examiner rejected claims 1-3 and 5-10 under 35 U.S.C. § 102(b) as anticipated by Bursk.

The Examiner rejected claim 11 under 35 U.S.C. § 102(b) as anticipated by Selle '320.

The Examiner rejected claim 4 under 35 U.S.C. § 103(a) as unpatentable over Bursk in view of Mettler.

The Examiner rejected claims 1 and 3-11 under 35 U.S.C. § 103(a) as unpatentable over the AAPA in view of Selle '968 or Leistner.<sup>5</sup>

#### THE ISSUES

1. The Appellant argues that Bursk fails to disclose a number of features required by claims 1-3 and 5-10 and thus does not anticipate the claimed subject matter. In particular, the issue turns on whether the Appellant has demonstrated that Bursk lacks:
  - (a) a rectangular-shaped nut having first and second “ends” that include a “raised flange,” as required by claim 1;
  - (b) a rectangular-shaped nut having a raised crown with interior threads thereon, as required by claim 2;
  - (c) a rectangular-shaped nut having raised flanges that partially “envelope” a threaded stud, as required by claim 3; and
  - (d) a rectangular-shaped nut having “flanges” residing in a “channel” of a threshold, as required by claim 5.

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<sup>5</sup> Because we are affirming the rejection of claims 1 and 3-11 under 35 U.S.C. § 103(a) as unpatentable over the AAPA in view of Selle '968, we do not reach the merits of the alternative rejection over the AAPA in view of Leistner.

2. Has the Appellant shown that the Examiner erred in asserting that the claimed limitation of “fasteners” in claim 11 is not positively recited and as such, the structural and functional limitations directed to the claimed “fasteners” do not carry patentable weight?
3. Has the Appellant shown that the Examiner erred in combining the teachings of Bursk and Mettler to show that it would have been obvious to a person of ordinary skill in the art to provide a second adjustment receptacle as taught by Mettler to the screw of the adjustable threshold assembly of Bursk?
4. Has the Appellant shown that the Examiner erred in combining the teachings of the AAPA and Selle ‘968 to arrive at the claimed invention? The issue turns on whether the Appellant has demonstrated that the combined teachings of AAPA and Selle ‘968 disclose:
  - (a) a rectangular-shaped nut having “raised flanges,” as required by claim 1;
  - (b) a rectangular-shaped nut having raised flanges that partially “envelope” a threaded stud, as required by claim 3;
  - (c) a rectangular-shaped nut having a first and a second adjustment receptacle, as required by claim 4; and
  - (d) a threshold assembly including a channel with a bore, an adjustable threaded stud press-fitted into the bore, and a nut constrained against rotation by the threshold, as required by claims 5-10.

## SUMMARY OF DECISION

We AFFIRM.

## FINDINGS OF FACT

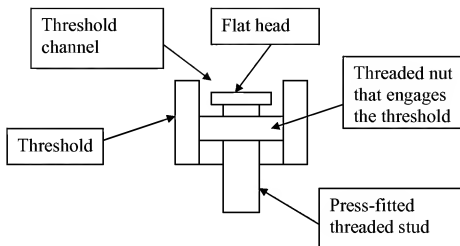
The following enumerated findings of facts (FF) are supported by at least a preponderance of the evidence. *Ethicon, Inc. v. Quigg*, 848 F. 2d 1422, 1427 (Fed. Cir. 1988) (explaining the general evidentiary standard for proceedings before the Office).

1. AAPA discloses an adjustable threshold fastener 100 including a threaded shaft 103 and a flat head 101, a rectangular shaped nut 102, an upper adjustment receptacle 105 in the head 101, and a lower adjustment receptacle 104 in the shaft 103 (Spec. 3, ll. 1-8 and figs. 1 and 1B).
2. AAPA further discloses a curvilinear track 223 including a nut guide 222, a head guide 221, and a rimmed edge 220, which when gravity fed with prior art fasteners 100 results in the shingling and jamming of the fasteners (Spec. 2, ll. 7-12 and figs. 2 and 2A).
3. AAPA specifically discloses on Page 2, ll. 14-21 of the Specification that:

The insertion mechanism press-fits a threaded stud into and through a wall of the threshold. The stud is then rotatably adjustable with respect to the wall... . A reciprocally threaded nut is also carried with the stud and when the stud is inserted into the threshold, one surface of the nut engages the threshold. The threaded stud has two ends and may be rotated from either end thereof. When the stud is rotated it has the effect of

extending the support surface away from the threshold enabling the threshold to be adjusted vertically.

4. A schematic drawing of the threshold assembly of the AAPA as understood by a person ordinarily skilled in the art is provided below:

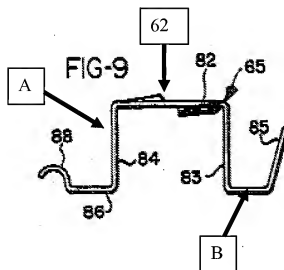


The Figure depicts the threshold assembly of the AAPA as understood by a person ordinarily skilled in the art showing a threshold having a channel, a press-fitted threaded stud having a flat head, and a threaded nut that engages the threshold.

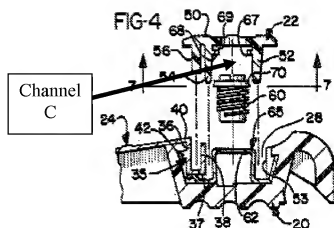
5. Bursk discloses an adjustable threshold assembly 10 including a base 20, a metal tread or cladding 24, a threshold 22, a screw 60, and a nut 65 (col. 2, ll. 48-51; col. 3, ll. 33-41; and figs. 4, 8 and 9).
6. Bursk further discloses that the nut 65 includes an inverted channel-shaped central section with a web 82, and downward legs 83, 84 from which extend upwardly turned end 85, and raised portion 88 (col. 4, ll. 24-32 and fig. 9).



7. The upwardly turned end 85 locates the nut 65 within the base 20 (col. 4, ll. 38-43 and fig. 4).
8. The raised portion 88 assures interlocking of the metal cladding 24 with the base 20 (col. 4, ll. 54-57 and fig. 4).
9. The web 82 of the nut 65 includes a semi-helix opening 62 that receives the threads of the screw 60 (col. 4, ll. 33-37 and figs. 3 and 9).
10. A Modified Figure 9 of Bursk is reproduced below:

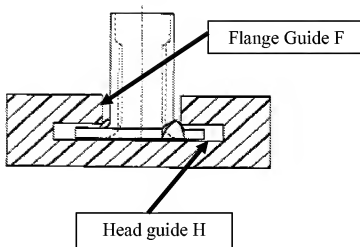


- The Modified Figure 9 of Bursk depicts nut 65 including crown A formed by web 82 and legs 83 and 84, transverse portions 86 and B, semi-helix opening 62, upwardly turned end 85, and raised portion 88.
11. A Modified Figure 4 of Bursk is reproduced below:



The Modified Figure 4 of Bursk depicts the channel C formed by legs 52 and 56 of the threshold 22 in which the screw 60 is fitted.

12. A modified Figure 6 of Selle '320 is reproduced below:



The Modified Figure 6 of Selle '320 depicts a curvilinear track including a flange guide F and a head guide H.

13. Selle '320 discloses a nut 10 having a U-shaped barrel 14, a flange 12, a central bore 20 with female threads 22, and pawls 28 (col. 3, ll. 13-18 and 28-29 and fig. 7).

14. Selle '320 further discloses that the purpose of the flange 12 and the pawls 28 is to eliminate the problems of jamming and shingling (col. 3, ll. 60-64).
15. Mettler discloses a rivet 1 for an adjustable threshold assembly having a head 4 having a first groove 8 and second groove 9 (col. 1, ll. 3-6; col. 3, ll. 28-29; fig. 1).
16. Mettler further discloses that first groove 8 and second groove 9 are provided in order to use either a flathead screwdriver or a Phillips head (col. 3, ll. 30-32).
17. Selle '968 discloses a stud retainer, delivered by a delivery track, having a body 304, a crown 303, and radially extending lips 301 and 302 (col. 3, ll. 49-60 and fig. 4).
18. Selle '968 further discloses pushing the retainers 300 through a delivery track 600 such that each of the lips 301, 302 of a stud retainer engages the lips of an adjacent stud retainer, and hence shingling of the retainers is prevented (col. 4, ll. 30-27 and fig. 6).
19. Selle '968 also discloses that the radially extending lips 301 and 302 partially envelope the center crown 303 (fig. 4).
20. The ordinary and customary meaning of the term "flange" is "a rib or rim for strength, for guiding, or for attachment to another object." *Merriam Webster's Collegiate Dictionary* 442 (Tenth Ed. 1997).
21. The screw 60 of Bursk is enveloped by the legs 83 and 84, and also by the upwardly turned end 85 and the raised portion 88 (figs. 4 and 9 of Bursk).

## PRINCIPLES OF LAW

### Claim construction

When construing claim terminology in the United States Patent and Trademark Office, claims are to be given their broadest reasonable interpretation consistent with the Specification, reading claim language in light of the Specification as it would be interpreted by one of ordinary skill in the art. *In re Am. Acad. of Sci. Tech. Ctr.*, 367 F.3d 1359, 1364 (Fed. Cir. 2004)).

We must be careful not to read a particular embodiment appearing in the written description into the claim if the claim language is broader than the embodiment. *See Superguide Corp. v. DirecTV Enterprises, Inc.*, 358 F.3d 870, 875 (Fed. Cir. 2004) (“Though understanding the claim language may be aided by the explanations contained in the written description, it is important not to import into a claim limitations that are not a part of the claim. For example, a particular embodiment appearing in the written description may not be read into a claim when the claim language is broader than the embodiment.”) The challenge is to interpret claims in view of the specification without unnecessarily importing limitations from the specification into the claims. *See E-Pass Techs., Inc. v. 3Com Corp.*, 343 F.3d 1364, 1369 (Fed. Cir. 2003).

### Anticipation

"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631(1987).

It is not necessary that the reference teach what the subject application teaches, but only that the claim read on something disclosed in the reference, i.e., that all of the limitations in the claim be found in or fully met by the reference. *Kalman v. Kimberly-Clark Corp.*, 713 F.2d 760, 772 (Fed. Cir. 1983).

### Obviousness

It is elementary that to support an obviousness rejection all words in a claim must be considered in judging the patentability of that claim against the prior art. *In re Wilson*, 424 F.2d 1382, 1385 (CCPA 1970).

“Section 103 forbids issuance of a patent when ‘the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.’” *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, \_\_\_, 127 S. Ct. 1727, 1734 (2007). The question of obviousness is resolved on the basis of underlying factual determinations including (1) the scope and content of the prior art, (2) any differences between the claimed subject matter and the prior art, (3) the level of skill in the art, and (4) where in evidence, so-called secondary considerations. *Graham v. John Deere Co.*, 383 U.S. 1, 17-18 (1966). *See also KSR*, 127 S. Ct. at 1734 (“While the sequence of these questions might be reordered in any particular case, the [*Graham*] factors continue to define the inquiry that controls.”)

While there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness, “the analysis need not seek out precise teachings directed to the specific subject matter of

the challenged claim, for a court can take account of the inferences and creative steps that a person of ordinary skill in the art would employ." *KSR*, 127 S. Ct. at 1741.

When a work is available in one field of endeavor, design incentives and other market forces can prompt variations of it, either in the same field or a different one. If a person of ordinary skill can implement a predictable variation, § 103 likely bars its patentability. For the same reason, if a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond his or her skill.

*Id.* at 1740. We must ask whether the improvement is more than the predictable use of prior art elements according to their established functions. *Id.*

If a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond his or her skill. *Id.* "In such situations, the proper question is whether the ordinary artisan possesses knowledge and skills rendering him *capable* of combining the prior art references." *DyStar Textilfarben GmbH & Co. Deutschland KG v. C.H. Patrick Co.*, 464 F.3d 1356, 1368 (Fed. Cir. 2006).

#### Intended Use

"It is well settled that the recitation of a new intended use for an old product does not make a claim to that old product patentable." *In re*

*Schreiber*, 128 F.3d 1473, 1477 (Fed. Cir. 1997) (citations omitted). Further, “[i]f ... the body of the claim fully and intrinsically sets forth the complete invention, including all of its limitations, and the preamble offers no distinct definition of any of the claimed invention's limitations, but rather merely states, for example, the purpose or intended use of the invention, then the preamble is of no significance to claim construction because it cannot be said to constitute or explain a claim limitation.” *Pitney Bowes, Inc. v. Hewlett-Packard Co.*, 182 F.3d 1298, 1305 (Fed. Cir. 1999) (citations omitted).

## OPINION

### *Issue (1)*

#### *Claim 1*

First, the Appellant argues that Bursk does not anticipate the subject matter of claim 1 because the parts 85 and 88 of Bursk “are not raised flanges,” but rather are “fittings which interengage other components of the sill to hold the adjustment mechanism in place” (App. Br. <sup>6</sup> 10 and Reply Br. 11). Second, the Appellant argues that in contrast to the claimed invention, the parts 85, 88 of Bursk are located “on the sides of the nut” rather than the “ends of the rectangularly-shaped nuts,” as required by claim 1 (App. Br. 10).

With respect to the Appellant’s first point, the Examiner takes the position that the meaning of the term “flange” is “a projection used for

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<sup>6</sup> We refer herein to the Appeal Brief (“App. Br.”), filed August 4, 2006, the Reply Brief (“Reply Br.”), filed December 14, 2006, and the Examiner’s Answer (“Ans.”), mailed November 15, 2006.

strength or for attaching to another object” or a “projecting rim or edge” (Ans. 18) and as such, the upwardly turning parts 85, 88 of Bursk “may be broadly construed as a ‘flange’ ” (Ans. 18). Similar to the Examiner’s position, we find that the ordinary and customary meaning of the term “flange” is “a rib or rim for strength, for guiding, or for attachment to another object.” *Merriam Webster’s Collegiate Dictionary* 442 (Tenth Ed. 1997) (FF 20). Moreover, we note that the Appellant’s Specification does not provide a definition of the term “flange” that is contrary to its ordinary and customary meaning. Bursk discloses a nut 65 having extending portions 86 and B which define an upwardly turned end 85 and a raised portion 88 (FF 6 and 10). Bursk further discloses that the upwardly turned end 85 locates (guides and attaches) the nut 65 within the base 20 (FF 7). Furthermore, the raised portion 88 assures interlocking (attaching) of the metal cladding 24 with the base 20 (FF 8). Hence, a person of ordinary skill in the art would recognize that the upwardly turned end 85 and the raised portion 88 of the nut 65 constitute a rib and a rim, respectively, for guiding and attachment to other objects. Therefore, we agree with the Examiner that the upwardly turned end 85 and raised portion 88 constitute “flanges.”

With respect to the Appellant’s second point that the parts 85, 88 of Bursk are located on the “sides” of the nut 65, rather than the “ends,” the Examiner contends that a person of ordinary skill in the art, when viewing a rectangular shaped object, would not make a distinction between the “sides” and the “ends” of a rectangle (Ans. 18-19). Furthermore, we note that the Appellant has not explicitly defined the term “end.” As such, we find that the ordinary and customary meaning of the term “end” is “the part of an area that lies at [a] boundary.” *Merriam Webster’s Collegiate Dictionary*



381(Tenth Ed. 1997). In this case, the upwardly turned end 85 and the raised portion 88 of the nut 65 extend from the transverse portions 86 and B, respectively (FF 10). Hence, a person of ordinary skill in the art would readily recognize that the upwardly turned end 85 and the raised portion 88 extend from the “ends” of the transverse portions 86 and B, respectively.

In light of the above, the Appellant’s arguments do not persuade us that the Examiner’s rejection of claim 1 as anticipated by Bursk is in error.

### *Claim 2*

The Appellant argues that the nut 65 of Bursk does not include a “raised crown having interior threads thereon” (App. Br. 11 and Reply Br. 11-12). As noted in our findings above, we find that the nut 65 of Bursk includes a crown A formed by web 82 and legs 83 and 84 (FF 10). Furthermore, Bursk specifically discloses that the screw 60 is received by the semi-helix opening 62 (FF 9). The ordinary and customary meaning of the term “thread” is “a helical rib.” *Merriam Webster’s Collegiate Dictionary* 1228 (Tenth Ed. 1997). A person of ordinary skill in the art would readily understand that the semi-helix opening 62 of Bursk constitutes a “thread.” Therefore, the nut 65 of Bursk includes a “raised crown having interior threads thereon,” as required by claim 2. In conclusion, the Appellant’s arguments fail to persuade us the Examiner erred in rejecting claim 2 as anticipated by Bursk.

### *Claim 3*

The Appellant argues that the “parts 85, 88 of Bursk...do not in any way envelope or surround the stud.” According to the Appellant, it is the

“legs 83 and 84 [that] surround or envelop[e] the screw 60” (App. Br. 12 and Reply Br. 12). It appears that the Appellant is interpreting the term “envelop” to require that no other structure be present between the stud and the raised flanges. The ordinary and customary meaning of the term “envelop” is to “enclose or enfold.” *Merriam Webster’s Collegiate Dictionary* 388 (Tenth Ed. 1997). In this case, although the Appellant is correct that the screw 60 of Bursk is enveloped by the legs 83 and 84, the screw is also enveloped by the upwardly turned end 85 and the raised portion 88 (FF 21). The term “envelop” is not so limiting as to exclude the presence of additional structures between the enveloping structure and the enveloped structure. Hence, claim 3 does not exclude the presence of an additional structure between the parts 85 and 88 and the screw 60 of Bursk. As long as the screw 60 of Bursk is partially “enclosed” by the nut 65 the limitation has been met. Bursk specifically discloses that the semi-helix opening 62 receives the screw 60 (FF 9). When looking at Figure 3 of Bursk a person of ordinary skill in the art would readily understand that the upwardly turned end 85 and the raised portion 88 of the nut 65 of Bursk partially “enclose” (envelop) the threaded stud 60 (FF 21). Lastly, we note that the use of the transitional term “comprising” in claim 1, from which claim 3 depends, is inclusive or open-ended and does not exclude additional, unrecited elements or method steps. *Mars Inc. v. H.J. Heinz Co.*, 377 F.3d 1369, 1376 (Fed. Cir. 2004). Therefore, in addition to the upwardly turned end 85 and the raised portion 88, the screw 60 of Bursk may also be “enveloped” by the legs 83 and 84, and still satisfy the limitations of claim 3. In conclusion, the Appellant’s argument does not persuade us the Examiner erred in rejecting claim 3 as anticipated by Bursk.

*Claim 5*

Claim 5 specifically requires that the flanges reside in a channel of the threshold. We understand the Appellant's argument to be that Bursk does not disclose that the flanges of the nut reside in the channel of the threshold (App. Br. 13). The modified Figure 4 of Bursk clearly shows a channel C formed by the legs 52 and 56 of the threshold 22 (FF 11). However, when viewing Figure 3 of Bursk, a person of ordinary skill in the art would readily recognize that the upwardly turned end 85 and the raised portion 88 (flanges) are not "residing" in the channel C, as required by claim 5. Therefore, we find that the Examiner erred in rejecting claim 5 as anticipated by Bursk. Hence, the rejection of claim 5 cannot be sustained. Likewise, the rejection of claims 6-10, which depend from claim 5, cannot be sustained.

In conclusion, because Bursk does not disclose all the claim limitations of claim 5, the rejection cannot be sustained. Similarly, the rejection of claims 6-10, which depend from claim 5, cannot likewise be sustained.

*Issue (2)*

The Appellant argues that the Examiner was incorrect to ignore certain claim limitations and to reject other claim limitations based on the use of the term "for" in the preamble of independent claim 11 (Reply Br. 20-21). In response, the Examiner takes the position that the structural term "fasteners" is not positively recited because the preamble of independent claim 11 "only positively recites ... the intended use of the curvilinear

delivery track for delivering a plurality of fasteners” (Ans. 13). The Examiner goes on to state that although the plurality of fasteners are not positively recited, nonetheless, the “curvilinear delivery track disclosed by the Selle [‘320] reference is inherently capable of performing the claimed intended use” (Ans. 14). We agree with the Examiner. Claim 11 is drawn to a “curvilinear delivery track” for delivering “fasteners” which possess certain characteristics (*e.g.*, a U-shaped cross section nut, a threaded stud with a support head, forward and rearward flanges, preventing shingling) and does not positively recite the structural limitation of the “fastener.” As such, independent claim 11 merely requires that the curvilinear delivery track be capable of delivering fasteners possessing the recited characteristics. As noted above, Selle ‘320 discloses a curvilinear track for delivering a plurality of fasteners including a flange guide and a head guide (FF 12). Further, Selle ‘320 discloses a U-shaped nut having forward and rearward flanges (pawls 28) and internal female threads adapted to receive a threaded stud (FF 13). Moreover, Selle ‘320 discloses that the forward and rearward flanges (pawls 28) eliminate the problems of jamming and shingling (FF 14). We appreciate the Examiner’s detailed figure on page 15 of the Answer showing, in dotted lines, the capability of the curvilinear delivery track of Selle ‘320 to deliver “fasteners” that include a U-shaped nut adapted to receive a threaded stud, forward and rearward flanges, and a support head on the threaded stud. In conclusion, because the curvilinear delivery track of Selle ‘320 is capable of delivering fasteners possessing the claimed characteristics, we find that Selle ‘320 satisfies the claimed limitations. Therefore, the Appellant’s argument does not persuade us the Examiner erred in rejecting claim 11 as anticipated by Selle ‘320.

*Issue (3)*

The Appellant argues that Mettler does not disclose “two adjustment receptacles 301, 307 as claimed” in claim 4 (App. Br. 18-19). That is, the Appellant appears to argue that Mettler does not disclose a threaded stud having an adjustment receptacle at each end of the threaded stud as shown in Figure 3B of the Appellant’s drawings. The Appellant’s argument is not persuasive, because claim 4 does not require that the adjustment receptacles be located at opposite ends of the threaded stud. Limitations not appearing in the claims cannot be relied upon for patentability. *In re Self*, 671 F.2d 1344, 1348 (CCPA 1982). Mettler specifically discloses an adjustable threshold assembly including a threaded stud having two adjustment receptacles (first groove 8 and second groove 9) (FF 15). Mettler further discloses that the two adjustment receptacles are provided in order to use either a flathead screwdriver or a Phillips head (FF 16). Therefore, we agree with the Examiner that it would have been obvious for a person of ordinary skill in the art to provide two adjustment receptacles as taught by Mettler to the threaded stud of Bursk “in order to allow both [a] Phillips head screwdriver and a flat head screwdriver to enter therein, making it more convenient to adjust the threaded screw regardless of which type of screwdriver is readily available” (Ans. 16).

The Appellant further argues that the teachings of Bursk and Mettler cannot be combined because although they both involve threshold design, “they do not employ the same technology” (App. Br. 19 and Reply Br. 21). This argument is not persuasive. “When a work is available in one field of endeavor, design incentives and other market forces can prompt variations of

it, either in the same field or a different one. If a person of ordinary skill can implement a predictable variation, § 103 likely bars its patentability.” *KSR Int’l. Co. v. Teleflex Inc.*, 550 U.S. 398, \_\_\_, 127 S. Ct. 1727, 1740 (2007). As noted above, the Examiner’s reasons that such a combination would have been obvious “in order to allow both [a] Phillips head screwdriver and a flat head screwdriver to enter therein, making it more convenient to adjust the threaded screw regardless of which type of screwdriver is readily available” (Ans. 16). The Appellant has not explained why any differences in technologies between Bursk and Mettler are of such a nature as to have dissuaded a person of ordinary skill in the art at the time of Appellant’s invention from providing two adjustment receptacles as taught by Mettler to the threaded stud of Bursk to make it more convenient to adjust the threaded screw using either a flathead screwdriver or a Phillips head, as reasoned by the Examiner.

In conclusion, the Appellant’s arguments do not persuade us the Examiner erred in rejecting claim 4 as unpatentable over Bursk in view of Mettler. Therefore, the rejection is sustained.

#### *Issue (4)*

##### *Claim 1*

The Appellants argue that neither AAPA nor Selle ‘968, alone or in combination, disclose a fastener having a threaded stud and a nut having “raised flanges” (App. Br. 21). In response, the Examiner contends that the meaning of the term “flange” is a “projection used for strength or for attaching to another object” or a “projecting rim or edge” (Ans. 28) and as such, the lips or wings 301, 302 of Selle ‘968 “may be broadly construed as

a ‘flange’ ” (Ans. 28). As noted above, we find that a “flange” is “a rib or rim for strength, for guiding, or for attachment to another object.” *Merriam Webster’s Collegiate Dictionary* 442(Tenth Ed. 1997). Selle ‘968 discloses a stud retainer, delivered by a delivery track, having a body 304, a crown 303, and radially extending lips 301 and 302 (FF 17). Selle ‘968 further discloses pushing (guiding) the retainers 300 through a delivery track 600 such that each of the lips 301, 302 of a stud retainer engages the lips of an adjacent stud retainer (FF 18). Hence, a person of ordinary skill in the art would recognize that the lips 301, 302 of the retainer 400 constitute a rib or a rim, respectively, for guiding. Therefore, we agree with the Examiner that the lips 301, 302 constitute “flanges.”

The Appellant further argues that the teachings of AAPA are not combinable with the teachings of Selle ‘968 because: (1) the Examiner has failed to identify any motivation, suggestion or teaching of the desirability to combine the AAPA and Selle ‘968 to arrive at the Appellant’s invention (App. Br. 21 and Reply Br. 29); (2) the teachings of AAPA and Selle ‘968 result from different technologies (App. Br. 23); and (3) the teachings of AAPA and Selle ‘968 teach away from the claimed invention (Reply Br. 29).

With respect to the Appellant’s first point, we note that while the requirement of demonstrating a teaching, suggestion, or motivation (the TSM test established by the Court of Customs and Patent Appeals) to combine known elements in order to show that the combination is obvious may be “a helpful insight,” it cannot be used as a rigid and mandatory formula. *KSR Int’l. Co. v. Teleflex Inc.*, 550 U.S. 398, \_\_\_, 127 S. Ct. 1727, 1741 (2007).

Regarding the Appellant's second point, the Appellant specifically contends that a person of ordinary skill in the art would not have combined the teachings of threshold adjustable fasteners (as evidenced by AAPA) with the teachings of stud retainers (washers) (as evidenced by Selle '968) (App. Br. 23). Specifically, the Appellant argues that in Selle '968, "it is the track 603, 604 which restrains the upward movement of the body 304 of the washer, not the lips 301, 302" (App. Br. 24). Furthermore, according to the Appellant, the lips 301, 302 of the retainer of Selle '968 are used merely for guidance of the retainer in the track and not to prevent shingling (App. Br. 24).

Although the teachings of AAPA and Selle '968 represent different technologies, obviousness does not require that all of the features of the secondary reference be bodily incorporated into the primary reference. *In re Keller*, 642 F.2d 413, 425 (CCPA 1981). In this case, AAPA discloses a curvilinear track which when gravity fed with fasteners, having a threaded stud and nut, results in shingling and jamming of the fasteners (FF 1 and 2). Selle '968 discloses preventing shingling of a plurality of stud retainers (washers), when fed in a delivery track, by providing radially extending lips 301, 302 to the retainer (raised flanges) (FF 17 and 18). Furthermore, Selle '968 specifically discloses that shingling of the retainers is prevented because each of the lips 301, 302 of a stud retainer engages the lips of an adjacent stud retainer (FF 18). A person of ordinary skill in the art would readily appreciate that the benefits gained by providing radially extending lips (raised flanges) to the retainer of Selle '968, could also be achieved in fasteners for the curvilinear track of AAPA. After all, "[a] person of ordinary skill is also a person of ordinary creativity, not an automaton."



*KSR Int'l. Co. v. Teleflex Inc.*, 550 U.S. 398, \_\_\_, 127 S.Ct. 1727, 1742 (2007). Moreover, the Appellant does not provide any evidence to show that modification of AAPA to provide the radially extending lips (raised flanges) of Selle '968 would have been beyond the technical grasp of a person of ordinary skill in the art.

Finally, with respect to the Appellant's third point, the Appellant argues that the "inclusion of raised flanges on a combination nut and stud arrangement as claimed in the instant invention would increase the dimensions of the fastener device" because it increases the diameter of the head 302 in the instant invention (App. Br. 29) (underlining added). The Appellant's argument appears to misconstrue the Examiner's rejection. The Examiner specifically states that,

"...it would have been obvious to those having an ordinary skill in the art, to modify the prior art rectangular nut (B) disclosed in the Applicant's admission of the prior art, by employing raised flanges (R,S) on first (C) and second (D) ends of said rectangular nut (B) as suggested by Selle US-6,640,968, in order to prevent shingling or jamming of said rectangular nut (B) when disposed within a threshold (H) of [f] a curvilinear delivery track" (Ans. 8) (underlining added).

Hence, it is not the Appellant's claimed invention that is modified by the teachings of Selle '968, as the Appellant appears to argue, but rather the AAPA.

In conclusion, the Appellant's arguments do not persuade us the Examiner erred in rejecting claim 1 as unpatentable over AAPA in view of Selle '968. Therefore, the rejection is sustained.

*Claim 3*

The Appellant argues that neither AAPA nor Selle '968 discloses "raised flanges which extend upwardly partially enveloping the threaded stud" (App. Br. 26). Nonobviousness cannot be established by attacking the references individually when the rejection is predicated upon a combination of prior art disclosures. See *In re Merck & Co. Inc.*, 800 F.2d 1091, 1097 (Fed. Cir. 1986). AAPA discloses a fastener 100 including a threaded shaft 103 and a rectangular shaped nut 102 (FF 1). Selle '968 discloses that the radially extending lips 301 and 302 (raised flanges) partially envelope the central portion (crown 303) (FF 19). We find that a person of ordinary skill in the art would readily recognize that the raised flanges in the fastener of AAPA as modified by Selle '968 would necessarily partially envelop the threaded stud 103, as required by claim 3. Hence, the rejection of claim 3 as unpatentable over AAPA in view of Selle '968 is sustained.

#### *Claim 4*

The Appellant argues that neither AAPA nor Selle '968 suggest "two receptacles...one from each end of the device" (App. Br. 26). As noted above, claim 4 does not require that the adjustment receptacles be located at opposite ends of the threaded stud. AAPA clearly discloses at least one upper adjustment receptacle 105 and a lower adjustment receptacle 104 (FF 1). Therefore, we find that AAPA meets the claimed limitation of a threaded stud having "first and second adjustment receptacles." As such, the rejection of claim 4 as unpatentable over AAPA in view of Selle '968 is sustained.

#### *Claims 5-11*

The Appellant first argues that neither AAPA nor Selle '968 teach or suggest "the studs being press-fit into the channel" (App. Br. 27). Secondly, the Appellant argues that Selle '968 does not teach or suggest a threaded stud that engages the channel of a threshold, that the stud is adjustable in a plurality of positions, and that the nut is constrained against rotation by the channel (App. Br. 27). In response, the Examiner points to Figures 1, 1B, and 2A to show that the AAPA teaches the claimed structural and functional limitations as recited in claims 5-10 (Ans. 5-7). Finally, the Appellant indicates that the Examiner's interpretation of the AAPA is incorrect because the "track of the prior art is not equivalent to a threshold of the instant invention," that is, the "device depicted in Fig. 2A is a track[,] it is not a threshold" (Reply Br. 38 and 40). According to the Appellant, the Examiner has misidentified the delivery track of Figures 2 and 2A as a threshold having a channel with a bore therein and a threaded stud press-fitted into the bore of the channel (Reply Br. 38).

Although we agree with the Appellant that Figures 2 and 2A of the Appellant's disclosure describes a delivery track, we note that the language of the AAPA (FF 3) would reasonably imply to a person of ordinary skill in the art that the AAPA discloses a threshold having a wall, which is part of a channel, into which a threaded stud having a flat head is press-fitted and is rotatably adjustable with respect to the wall, and a threaded rectangular nut that engages the threshold (FF 1 and 4) (as required by claims 5 and 7). Moreover, since the threaded stud in the AAPA is press-fitted into the wall (FF 3), a person ordinarily skilled would understand that the wall necessarily includes a bore therein (as required by claim 5). Similarly, we note that because one surface of the rectangular nut in the AAPA engages the

threshold (FF 1 and 3), a person ordinarily skilled would understand that the nut is restrained against rotation by the threshold (channel) (as required by claims 6, 9 and 10). Finally, because the threaded stud is rotatably adjustable with respect to the threshold wall (FF 3), a person ordinarily skilled in the art would understand that the stud “threadingly engages” the threshold wall (channel) (as required by claim 8).

Lastly, with respect to claim 11, the Appellant appears to argue the modification of the track of Selle ‘968 (App. Br. 27 and Reply Br. 42). However, in contrast to the Appellant’s position, the rejection of claim 11 is not based on the modification of the track of Selle ‘968, but rather on the modification of the track of the AAPA in view of the teachings of Selle ‘968 (Ans. 4). That is, according to the Examiner, it would have been obvious to a person of ordinary skill in the art to provide the lips 301, 302 of Selle ‘968 to the rectangular nut of the AAPA because Selle ‘968 specifically teaches that the lips 301, 302 prevents shingling in a delivery track (Ans. 8). We agree with the Examiner, and further find that a person of ordinary skill in the art would readily appreciate that the benefits gained by providing the radially extending lips (raised flanges) to the retainer of Selle ‘968, could also be achieved in fasteners for the curvilinear track of AAPA. Moreover, because claim 11 does not positively recite the structural limitations of the “fastener,” claim 11 merely requires that the curvilinear delivery track be capable of delivering fasteners possessing the recited characteristics. We note that the Appellant has not pointed to any specific feature of the track of the AAPA that would lead a person of ordinary skill in the art to conclude that the track of the AAPA would not be capable of delivering the modified threaded stud and nut assembly of the AAPA in view of Selle ‘968. The

track of the AAPA includes a nut guide 222 (FF 2) that a person of ordinary skill in the art would readily understand to be capable of accommodating the radially extending lips (raised flanges) of the threaded stud and nut assembly of the AAPA in view of Selle '968.

For the foregoing reasons, the Appellant's arguments do not persuade us that the Examiner erred in rejecting claims 5-11 as unpatentable over the AAPA in view of Selle '968. Accordingly, the rejection of claims 5-11 is sustained.

#### DECISION

The decision of the Examiner to reject claims 1-3 and 5-10 under 35 U.S.C. § 102(b) as anticipated by Bursk is affirmed as to claims 1-3 and reversed as to claims 5-10.

The decision of the Examiner to reject claim 11 under 35 U.S.C. § 102(b) as anticipated by Selle '320 is affirmed.

The decision of the Examiner to reject claim 4 under 35 U.S.C. § 103(a) as unpatentable over Bursk in view of Mettler is affirmed.

The decision of the Examiner to reject claims 1 and 3-11 under 35 U.S.C. § 103(a) as unpatentable over the AAPA in view of Selle '968 is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a). *See* 37 C.F.R. § 1.136(a)(1)(iv) (2008).

AFFIRMED

Appeal 2007-2787  
Application 10/824,915

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